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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,006	02/20/2002	Sarah Fredriksson	003300-909	4540

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EXAMINER	
REDDING, DAVID A	
ART UNIT	**PAPER NUMBER**
1744	

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,006	FREDRIKSSON ET AL.	
	Examiner	Art Unit	
	David A Redding	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *11 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10/28/2004 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-10, are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,516,670 ('670).

The '670 patent discloses a method of introducing reagent, genetic material (DNA) into biological cells by using magnetic particles in solution with the biological cells and exposing the particles to a non-uniform magnetic field and optionally pulsing the field to cause the particles to move to and penetrate the cell walls. The magnetic field is created by a the device shown in figure 1 comprising at least one coil (34). See col.1, lines 10-16; col.2, lines 56-67; col.3, lines 22 thru col.4, line 24; col5, line 34-col.7, line 55. The patent further discloses that once the particles are in the target area they can be manipulated in situ, i.e. the current in coil (34) may be alternated to produce an **alternating magnetic field** in the gap between the two pole pieces. This will cause the desired particles (60) to oscillate (col. 7, lines 9-17).

Further, the patent discloses that if desired particles can be used that become heated in the presence of an externally applied energy field (col.3, lines 28-31).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 2-6,12-19, are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,516,670 ('670).

The embodiments of claims16-19 were addressed in the rejection above.

Claims 2,3,12, specify particular magnetic field strengths. The '670 patent discloses the use of an alternating magnetic field and a field strength of 500 gauss (col. 7, lines 9-12).

The courts has held that, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Accordingly, the embodiments of claims 2,3,12, are considered to be the obvious results of routine experimentation.

Regarding claims 4-6,13-15, the patent discloses a secondary magnetic force from a 1 inch rod-shaped magnet was applied manually in an alternating fashion to cells containing particles. This alternating exposure to a secondary force resulted in oscillation of particles within cells, the frequency of which increased proportionally with the increase in speed of the alternating motion of the magnet (col. 9, lines 28-36). This embodiment is considered to produce the environment defined in claim 4 and 13-1 since it is produced using the two alternating magnetic fields produced by the coil and secondary magnet. The secondary magnet is considered to be an obvious functional equivalent to the claimed second "coil".

With regards to claims 5,6, the conditions are obvious in order to produce the alternating fields. If the currents supplied to the coils were not alternating you could not produce the alternating field and thus the oscillating effect of the particles.

Allowable Subject Matter

The indication of allowable subject mater is withdrawn in view of the new rejection in view of USP 5,516,670.

Response to Arguments

Applicant argues that the US patent to Kuehnle et al. does not teach a method of applying an alternating magnetic field to a sample containing magnetic particles which causes and increase in thermal and kinetic energy of the particles. The examiner disagrees. First, applicants claims do not require that an increase of thermal energy of the particles. The claims use alternative language regarding the thermal energy. Secondly, the patent specifically states that once the particles (60) where in the target area they can be manipulated in situ, i.e. the current in coil (34) may be alternated to produce an **alternating magnetic field** in the gap between the two pole pieces. This will cause the desired particles (60) to oscillate (col. 7, lines 9-17). Further, the patent discloses that if desired particles can be used that become heated in the presence of an externally applied energy field (col.3, lines 28-31).

Election/Restrictions

This application contains claims 12 and 20 are drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Redding whose telephone number is 571-272-1276. The examiner can normally be reached on Mon.-Fri. 6:00 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Redding

D.A.R.